1859MNRAS..19...85W

Leucothea.

Mean Solar Time of Observation.		Apparent R.A.	Apparent N.P.D.
	h m s	h m s	° ′ ″
1858, Dec. 2	11 25 7·4	4 11 9·10	57 38 14·09

Lætitia.

Mean Solar Time of Observation.		Apparent R.A.	Apparent N.P.D.
	h m s	h m s	° ′ ″
1858, Dec. 2	7 7 19·3	23 52 38·58	99 39 22·16

Ariadne.

Mean Solar Time of Observation.		Apparent R.A.	Apparent N.P.D.
	h m s	h m s	° ′ ″
1858, Dec. 2	10 14 13·2	3 0 3·23	70 13 39·21

Note.—The above observations of *Thetis* and *Leucothea* are published on account of their near agreement with the Ephemerides of Schönfield and Schubert respectively, but from the continued unfavourable state of the sky, no other observations could be secured at Greenwich to compare with them.

Extract of a Letter from Prof. R. Wolf, of Zurich, to Mr. Carrington, dated Jan. 12, 1859.

(*Translation.*)

"In my eighth communication on the subject of the solar spots now ready for the press, I intend partly to give in detail my observations during the year 1858, and partly to continue the researches commenced in the seventh number. I shall accordingly show, by employing, on the one hand, my own observations in the year 1849 to 1858; and on the other, extracts from the observations of Schwabe in the years 1826 to 1848, that the formula

$$M = 50{\cdot}31 + 3{\cdot}73 \left\{ \begin{array}{l} 1{\cdot}68 \sin 585^{\circ}{\cdot}26\, t + 1{\cdot}00 \sin 360^{\circ}\, t + \\ 12{\cdot}53 \sin 30^{\circ}{\cdot}35\, t + 1{\cdot}12 \sin 12^{\circ}{\cdot}22\, t \end{array} \right\}$$

in which t denotes the number of years elapsed since a period of mean spot-frequency, gives a curve very similar to the sun-spot-curve; and therefore is very fit to be taken as the foundation of the more detailed research which I have now in hand. Now, as the coefficients of the four sines are the values which the fraction $\frac{m}{r^2}$ assumes, when for m and r are successively substituted the masses and mean distances of *Venus, Earth, Jupiter, and Saturn;* and the angles of the four sines are the values of $\frac{360^{\circ}}{t}$, when for t are substituted the periodic times of the same planets, the conclusion seems to be inevitable, that my

Downloaded from http://mnras.oxfordjournals.org/ by guest on August 25, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System

1859MNRAS..19...85W

conjecture that the variations of spot-frequency depend on the influences of *Venus, Earth, Jupiter, and Saturn,* will not prove to be wholly unfounded. The preponderating planet *Jupiter* will in such case mainly determine the length and height of the wave of the spot-period; *Saturn* will cause small variations in the length and height; and, finally, the earth and *Venus* will change the smooth wave-line into a rippled one. Further investigation may decide this important question either affirmatively or negatively; but sketched out merely as it now is, I believe it will be found to have considerable interest.

"You will oblige me by bringing this contribution of mine to the knowledge of the Royal Astronomical Society. . . ."

On the Visibility of Donati's Comet. By R. Hodgson, Esq.

Aug. 30th. The comet was barely visible with the naked eye, though easily found with an opera-glass.

Oct. 5th. Daylight, 11 A.M. *Arcturus* bright as a point; but the comet invisible, though the clock carried the telescope, (6⅓ inches aperture; 7 feet 6 inches in focal length). Power used, low comet eye-piece, magnifying 25 times.

Oct. 6th. Repeated the observation at 11 P.M. Covered my head with hood, and excluded all extraneous light from the eye, but could not see the comet. *Arcturus* brilliant; and *Jupiter* to be seen near the western horizon.

Oct. 9 and 10. Same time, telescope, and powers; but the comet was not to be seen.

Oct 17, 6 P.M. dark twilight. The comet visible in the finder, but invisible to the naked eye.

Note on a Method recently proposed by Lieut. Raper for Clearing the Lunar Distance from the Effects of Parallax and Refraction.[*] By J. Riddle, Esq.

If C represent the centre of the earth, O the place of the observer on its surface, S and M the places of the sun and moon (the figure is so easily conceived that it is hardly necessary to draw it). Then adopting the notation of the paper referred to, with the addition of *d* for the right line S M; the plane triangles S C M, S O M, C S O, and C M O, give the following symmetrical equations:—

---

[*] *Monthly Notices,* Vol. XVIII. p. 303.

Downloaded from http://mnras.oxfordjournals.org/ by guest on August 25, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System